

REMARKS

The Office Action dated August 5, 2008 has been read and carefully studied and the present Remarks submitted to better describe the differences between the present invention, as claimed, over the cited prior art references.

In that Office Action, claims 39-58 were rejected under 35 U.S.C. 103(a) as being unpatentable over Yata et al, U.S. Patent 5,000,581.

Initially a brief review or summary of the present invention may be of assistance in the review of the following distinctions over the cited prior art.

The claims cover an advantageous method of externally measuring the temperature of the liquid contents of a wine bottle. Of course the temperature of wine is known amongst connoisseurs to be essential to the optimal enjoyment of the wine (see page 1 lines 13-23 of the application). Optimal temperatures of enjoyment will vary from wine to wine but will be within a very narrow range of temperature. Likewise wine is stored and treated very carefully and is never shaken. Thus, a means of accurately measuring wine temperature external to the bottle has been sought for many years, but success has been limited to bracelet clips and the like which are not sufficiently accurate for the purpose – particularly in a cooling situation in a fridge or using a cooling sleeve.

In all the years that wine thermometers have been designed, never has the concave base of the wine bottle been used for this purpose. The present inventor is the first to utilize the base of the bottle, to understand it is particularly suited in a means for estimating the temperature of the wine, and to realize that even when there is a significant temperature gradient in the wine when it is being cooled in an upright position (as described on page 18 line 33 to page 19 line 7 – this differential from the top to the bottom of the bottle can be as much as 7-8°C for instance when a wine bottle is cooled with a cooling sleeve), the temperature probe within the thermally-enclosed concave base is surprisingly still able to give a very good estimate for the average temperature of the wine (i.e. the mixed wine temperature when dispensed) – a significant advantage (see pages 19-23 of the application).

With that in mind, it is submitted that none of the prior art references cited by the Examiner discloses a method of the present invention.

Taking, therefore the sole reference relied upon in the Office Action, the Yata et al reference, it should be noted that its European equivalent (EP332355) was also known to the UK patent office and EPO examiners before they granted claims of the same scope as that pending in US prosecution.

This Yata et al device is specifically tailored to the measurement of the temperature of milk in baby bottles such that the milk is in the temperature range 34-38 °C. Apart from the art being from a very different field from the wine area (and there are no comments whatsoever to suggest it would have a general use in any other field) there are other important differences.

- 1) Importantly a skilled person in the wine field would have doubted and could not have predicted that the arrangement of Yata et al would have functioned well enough to be applied to the accurate measurement of wine temperature. Typically, the feeding bottle will be shaken to mix milk powder and warm water. As a result, the temperature of the liquid in the bottle will be uniform throughout the bottle. The temperature probe in the feeding bottle is designed to measure this uniform temperature in a relatively short period of time. The examiner should understand that the volume of liquid in a vertically-mounted sealed wine bottle is substantially different from a partially-filled feeding bottle and in no circumstances will it be shaken. The temperature differential between the wine at the top and bottom of the wine bottle as it cools or warms in different ambient conditions, will be different from that of the milk in a shaken feeding bottle. In addition the time span for measurements is completely different ranging from 30 minutes for accelerated cooling of wine to 2-3 hours for the warming in air of a bottle taken from a cellar. The skilled person in the wine field would therefore have had significant doubts whether the Yata et al device would work to show an accurate average temperature of the contents of an unshaken wine bottle in the circumstances described above.
- 2) Furthermore, it should also be remembered that the optimal drinking temperature ranges of different wines are narrower (2-3 degrees – see page 1 lines 20-23 of the present application) than that of milk. This would be a further reason for a skilled person to doubt whether (and

would not predict that) the device of Yata et al could be used in the wine field (within its highly stringent requirements) to perform the method of the present invention.

- 3) Last, it should be noted that the Yata et al device comes as a whole with one baby bottle snap-fitting into one temperature-measuring base – a skilled person in the wine field would therefore realize that it cannot be used for a variety of wine bottles (with varieties of bottle base diameters) as is required for a wine thermometer, and in any case wine bottles do not possess any features which could snap fit onto anything else. A skilled person would therefore disregard the prior art as being structurally unsuitable for the measurement of wine temperature.

The present inventor for the first time has surprisingly found that the average temperature of a cooling or warming unshaken bottle of wine can be estimated at the concave base of the bottle with the necessary accuracy and precision, and has described a method to achieve this purpose. It is therefore submitted that claim 39 (and all dependent claims) are inventive over the disclosure of Yata et al. either on its own or in combination with any of the other cited art recited by the examiner.

It should also be noted that the Examiner's recitation of Ex Parte Masham seems inappropriate. In the present case, the prior art apparatus does not satisfy the claimed structural limitations in that the prior art does not recite a wine bottle with a concave base – an essential structural feature of the invention. Instead of disclosing any wine bottle, the prior art instead discloses a specific snap-fitting nursing bottle. Furthermore it must be appreciated that the claimed invention is a method not a product, and the prior art does not envisage or contemplate any general method for the accurate estimation of average wine temperature, nor would the skilled person believe it would be suitable for this purpose (as discussed above) without a hind-sight knowledge of the present invention.

With the distinctions stated with respect to the Yata et al reference, following is a summary of the distinctions with respect to the other references cited by the Examiner.

Garrido et al. (FR2749654)

Contrary to the Examiner's assertion that this document discloses a temperature sensor that is attached to a bottom of a wine bottle, this document actually only discloses that a temperature-

sensitive label is stuck towards the bottom of a bottle of wine (i.e. the lower end of the bottle cylinder).

This is clear from the description of the device which is a sticker with a thermographic ink for a user to be able to visualize (see page 1 line 7) when wine is ready to be drunk by sticking it to a wine bottle. No where on page 1 or 2 does it say where the sticker should be placed, only that it need be "*sur la bouteille*" (on the bottle) and that it needs to be visible to the user. Only on the figures page 1/1 does it say in the instructions: "*Collez le TID au bas de la bouteille*". This means stick the product at (or towards) the bottom (or lower end) of the bottle, and is NOT an instruction to stick it within the concave base of the bottle.

This is apparent from the fact that:

- 1) linguistically if the inventor had meant stick it within the base of the bottle he would have used "*au fond de la bouteille*" or "*au dessous de la bouteille*" rather than "*au bas de la bouteille*". See the appended page of definitions of "*bas*", "*fond*", and "*dessous*" from the French-English dictionary at the website <http://www.french-linguistics.co.uk/dictionary/> where this distinction in language is made clear.
- 2) the prior art product relies on being seen or visualized – it therefore makes sense that the produce is stuck on the outside surface of the bottle than within the concave base.

In any case, according to the art, the fact that the sticker is placed towards the bottom of the bottle is not thought to be a critical feature of the invention as it is not discussed in either the description page or claim of the invention. Furthermore there is no disclosure of thermally-enclosing the concave base of the bottle – a necessary feature of the presently examined claim. In fact, to do so would be counter-intuitive for the use of the prior art label which needs to be visualized and not completely hidden from view.

For all the above reasons Garrido et al. does not disclose the present invention, nor teaches in the direction of the present invention. If anything it teaches away from the invention through relying on the temperature sensor to be seen in order to be used. It is therefore submitted that claim 39 (and all dependent claims) are inventive over the disclosure of Garrido et al. either on its own or in combination with any of the other cited art recited by the examiner.

Casher (US2007/0245765)

This document discloses a wine cooler. It does not disclose a method of externally measuring the temperature of the wine through the use of a temperature probe within the thermally-enclosed concave base of a wine bottle. It is therefore submitted that claim 39 (and all dependent claims) are novel over this disclosure and furthermore inventive over it either on its own or in combination with any of the other cited art recited by the examiner.

Pariseau (US6579006)

This document discloses a thermochromic device for the outside of a product container for indicating visually the temperature of contents within the container. Like Garrido et al., due to the visual nature of the device there is no disclosure or encouragement to putting the device within a thermally-enclosed concave base of a wine bottle. It is therefore submitted that claim 39 (and all dependent claims) are novel over this disclosure and furthermore inventive over it either on its own or in combination with any of the other cited art recited by the examiner.

Shteynberg (US6264049)

This document discloses a nursing bottle with a compartment for a thermometer that extends into the inner chamber of the bottle. It therefore in no way discloses a method for externally measuring the temperature of the contents of a wine bottle through the use of the thermally-enclosed concave base. It is therefore submitted that claim 39 (and all dependent claims) are novel over this disclosure and furthermore inventive over it either on its own or in combination with any of the other cited art recited by the examiner.

Seely (US6158227)

This document discloses a beverage chilling monitoring and alarm device comprising a temperature sensor which is detachably affixable to a beverage container. The only disclosure of how this should be done is for the sensor to be supported in a strap which is put around circumference of the container in a tight fitting manner (see Figures 4 and 5 where a wine bottle is shown). It therefore in no way discloses a method for externally measuring the temperature of the contents of a wine bottle through the use of the thermally-enclosed concave base, nor realizes the advantages of such a system for wine bottles as described above. It is therefore submitted that claim 39 (and all dependent

claims) are novel over this disclosure and furthermore inventive over it either on its own or in combination with any of the other cited art recited by the examiner.

Lee et al. (US5769541)

This document describes an ice-making mechanism for a refrigerator, and does not relate to a method of externally measuring the average temperature of the liquid contents of a wine bottle through the use of the thermally-enclosed concave base. The advantage of the claimed system (column 2 lines 19-42) is that it is less complicated than conventional ice-making temperature sensors, and that it is more robust given the number of ice cube tray twists that occur every time the ice cubes drop. Nothing about the structure of the device, nor its stated advantages, would inspire the skilled person to apply the device to the wine field where existing thermometers are already simple, and no twisting or flexing occurs to the wine bottle. It is therefore submitted that claim 39 (and all dependent claims) are novel over this disclosure and furthermore inventive over it either on its own or in combination with any of the other cited art recited by the examiner absent any hind-sight knowledge of the present application.

Hsiao (US6739749)

This document discloses a nursing bottle incorporating a thermometric sensor which can extend through a seal into liquid contents of the bottle. It therefore in no way discloses a method for externally measuring the temperature of the contents of a wine bottle through the use of the thermally-enclosed concave base. It is therefore submitted that claim 39 (and all dependent claims) are novel over this disclosure and furthermore inventive over it either on its own or in combination with any of the other cited art recited by the examiner.

Butenschön (US4555040)

This document discloses a wine glass with an integrated thermometer in its stem which is adjacent to or extending into the wine in the glass. Clearly for such an integrated glass there is no where else to place the thermometer but the stem. There is no suggestion whatsoever that the invention has any relationship with the external measurement of wine temperature in wine bottles, where the manufacture of an integrated bottle with thermometer would be unduly expensive for a disposable item, and in any case the only place to integrate the thermometer would be into the side wall of a bottle, there not being the equivalent of a glass stem at the concave base of the bottle. It is

therefore submitted that claim 39 (and all dependent claims) are novel over this disclosure and furthermore inventive over it either on its own or in combination with any of the other cited art recited by the examiner.

Hofer (US4104916)

This disclosure discloses a wine thermometer for an open bottle of wine. It therefore in no way discloses a method for externally measuring the temperature of the contents of a wine bottle through the use of the thermally-enclosed concave base. It is therefore submitted that claim 39 (and all dependent claims) are novel over this disclosure and furthermore inventive over it either on its own or in combination with any of the other cited art recited by the examiner.

Parker (US3864976)

This disclosure discloses a thermometer strip which is placed around the circumference of a container. It therefore in no way discloses a method for externally measuring the temperature of the contents of a wine bottle through the use of **the thermally-enclosed concave base**, nor realizes the advantages of such a system for wine bottles as described above. It is therefore submitted that claim 39 (and all dependent claims) are novel over this disclosure and furthermore inventive over it either on its own or in combination with any of the other cited art recited by the examiner.

Dimmock (US2239221)

This disclosure discloses a gas-volume indicating gauge which comprises a needle which can be forced through the cap of a bottle for testing the gas contents of the liquid in the bottle (page 2, first column, lines 1-7). It therefore in no way discloses a method for externally measuring the temperature of the contents of a wine bottle through the use of the thermally-enclosed concave base. It is therefore submitted that claim 39 (and all dependent claims) are novel over this disclosure and furthermore inventive over it either on its own or in combination with any of the other cited art recited by the examiner.

Brooks (US2223598)

This disclosure discloses a sampling can which enables the temperature of a sample from a tank to be measured (page 1, column 1, lines 5-12). It therefore in no way discloses a method for externally measuring the temperature of the contents of a wine bottle through the use of the

thermally-enclosed concave base. It is therefore submitted that claim 39 (and all dependent claims) are novel over this disclosure and furthermore inventive over it either on its own or in combination with any of the other cited art recited by the examiner.

Sharpe (US2006/0026971)

This disclosure has a provisional filing date of 6th July 2004. The present application has a PCT filing date of 15th April 2004.

Gluck (US2008/0084915)

This disclosure has a priority filing date of 10th October 2006. The present application has a PCT filing date of 15th April 2004.

Accordingly, none of the cited art has disclosed that the base of wine bottles is the ideal place to accurately measure the internal temperature of wine within the error and precision demanded by wine professionals, as demonstrated by the inventor. It is therefore submitted that independent claim 39 is allowable over the cited references, along with its dependent claims, and an allowance of the present application is respectfully solicited.

Respectfully submitted,

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